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27. FIRST RECORD OF THE POLKA-DOT TRIGGERFISH
CANTHIDERMIS ROTUNDATUS (PROCÉ) (= *CANTHIDERMIS MACULATUS*)
(FAMILY BALISTIDAE) FROM MUMBAI

The monsoon season is a harbinger of unusual fishes, normally associated with coral reefs, to Mumbai. So far, the following have been recorded from Mumbai in this season: Moorish Idol *Zanclus cornutus* and Squirrel Fish *Holocentrus rubrum* (Chhappgar and Deshmukh 1964), Filamented Butterflyfish *Anisochaetodon (Linophora) auriga*, Lined Butterflyfish *Anisochaetodon (Oxychaetodon) lineolatus*, Raccoon Butterflyfish *Chaetodon (Chaetodontops) lunula*, Yellow-headed Butterflyfish *Chaetodon (Rhabdophorus) xanthocephalus* (Chhappgar and Jatar 1968); Scribbled Leatherjacket *Alutera scripta* and yellow-finned leatherjacket *Monacanthus monoceros* (Chhappgar 1978), Red-toothed Triggerfish *Odonus niger?* (Chhappgar and Ringangaonkar 1990) and pig-faced filefish *Paramonacanthus choirocephalus* (Chhappgar and Muley 1997).

In July 2002, two specimens of a fish were collected at Girgaum Chowpatty (south Mumbai) and brought alive to the Taraporevala Aquarium. One died within a few days, but the larger one is still surviving at the time of writing this note. It was about 10 cm when captured, but is growing fast. It has been identified as the Polka-dot (also known as round or rough) Triggerfish *Canthidermis rotundatus* (Procé).

The body of this fish (at least at this size) does not have the typical shape of a triggerfish with a huge triangular head almost one-third the length of the body. It is more akin to Cardinal Fish (*Apogou* spp.). But it has the typical "locking-trigger" of the first (spinous) dorsal fin, and the high, triangular soft dorsal and anal fins bending together in the same direction while swimming — a movement typical of triggerfishes.

Colouration: The body is coal-black with ivory-white rounded spots scattered all over it. Within a month of capture, the number and size of these spots have perceptibly increased. The black body colouration during the day fades to a very light brown at dusk and remains so at night, darkening again in the morning. The dorsal spine is black and held erect.

The colour after preservation has been described by de Beaufort and Briggs (1962) as "light brown with dark brown interrupted longitudinal stripes on head, body and tail,

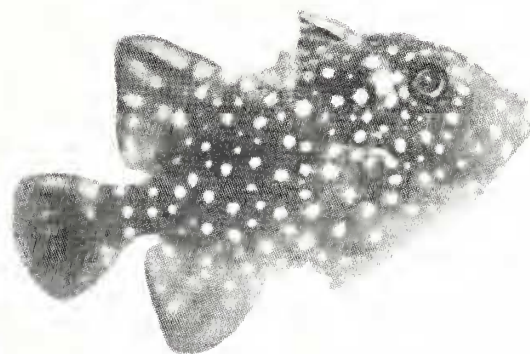


Fig. 1: Polka-dot Triggerfish, *Balistes maculatus*

dissolving into spots at bases of second dorsal, anal and caudal. Some parallel oblique stripes on cheeks." Munro (1955) also observed "undulating brown lines and fine blue spots on sides. Fins brownish. Soft dorsal with obscure blotches on middle of highest rays. Caudal dark brown" (in an 11 cm fish). Day (1878-88) gives the body colour as bluish-black. We have not observed any stripes on the live fish. It is said to grow to 55 cm. Colour illustrations of the fish have been given by Halstead (1967) in addition to the various authors mentioned in the references.

As it is not possible to make scale or fin-ray counts in the live specimen, these counts by various authors are given below.

Day: D. III/26-27, P. 15, A. 24-25, C. 12, L. I. 40-55, L. tr. 28.

Munro: D. III/25-26, A. 23-24, L. I. 42-57, L. tr. 30-54.

Barnard: D. III + 24-26, A. 24-25, L. tr. 28-30.

Smith: D. III/24-27, A. 24-26, L. tr. 30.

Beaufort & Briggs: D. III/2.23-24, A. I-2.21, P. I. 14, L. I. 42-43, L. tr. 29-34.

Jones & Kumaran: D₁ III, D₂ ii, 23-24, A. i, 21-22, P. i, 13-14, L. I. 42-44 + 6-7, L. tr. 29-32.

It is likely that the depth of the body increases as the fish grows, as seen from the illustrations given by the various authors. The depth is contained 2½ to 3 times in the total

length (Day, pp. 687, 688, pl. clxxv), 1¼ times in standard length (Munro, p. 271, pl. 53), 2½ times (Smith, p. 409, pls. 91, 104); in small specimens, 1.7-1.9, 2-2.3 in length with caudal (de Beaufort and Briggs, pp. 309-312), 2.1 to 2.6 in standard length, 2.5 to 3.1 in total length (Jones and Kumaran 1980, pp. 665, 666, fig. 566). In our specimen it is 2.1 times in standard length 2.5 times in total length (132 mm).

Diagnostic features: A groove in front of eye. Scales rough, granular, without spines. The cheeks are entirely scaled, but there are no osseous scutes behind the gill-opening. Second dorsal and anal high anteriorly. Ventral spine short, covered with spinules, immovable (according to de Beaufort and Briggs as well as Jones and Kumaran), usually movable (according to Day). Hind edge of caudal fin convex.

The genus *Canthidermis* can be distinguished from *Xanthichthys* and *Pseudobalistes* by the nature of its cheeks, which are normally scaled and without naked grooves (*Xanthichthys* has longitudinal naked grooves, while in *Pseudobalistes* the cheeks are naked anteriorly). It differs from *Odonus* in not having red teeth. It differs from *Rhinecanthus* and *Balistapus* in having a groove before the eye. It can be distinguished from *Abalistes* in not having a depressed caudal peduncle, and from *Melichthys*, *Balistoides*, *Sufflamen* and *Hemibalistes* in not having spines on the caudal peduncle. Finally, it differs from *Balistes* in not having enlarged plates behind the gill-opening.

Systematics: There is a great deal of confusion in the nomenclature of this species. It was first described by Procé (Bull. Soc. Philom. Paris, p. 30) as *Balistes rotundatus* in 1822. The genotype is based on *Balistes angulosus* of Quoy and Gaimard 1824. (Fraser-Brunner 1935, pp. 658-663). The genus *Canthidermis* was created by Swainson in 1839, but

subsequent authors, right down to Day (1878-88), continued to use *Balistes*, a genus created by Linnaeus in 1758. It was Bleeker (Atlas Ichth. des Indes Orientales Néerlandaises V, 1865) who, though continuing to use *Balistes* as genus, added *Canthidermis* as a subgenus, describing the species as *Balistes (Canthidermis) maculatus*. Jordan & Fowler (Proc. U.S. Nat. Mus. xxv, 1902) raised it to *Canthidermis rotundatus*. de Beaufort and Briggs, as late as 1962, have used the genus *Balistes* without the subgenus *Canthidermis*.

There is also difference of opinion whether *rotundatus* is the juvenile of *maculatus*, or whether the two are separate species. Most descriptions of *rotundatus* (with its synonyms *oculatus* of Gray 1832, Bleeker 1865, Gunther 1910, Duncker and Mohr 1929 and *senticosus* of Richardson 1848, Bleeker 1853 and Gunther 1910) are based on small specimens, whereas most accounts of *maculatus* (with its synonym *azureus* Lesson 1830) are of large specimens. There is further confusion as Bloch's (1786) *maculatus* is from the West Indies (Atlantic Ocean), while Bleeker's (1865) *maculatus* are from the Indo-Pacific area.

As the present specimen is of a small size, we have preferred to call it *Canthidermis rotundatus*.

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